

**Claims:**

1. A card-based system for originating impersonal identifiers for an unissued card in a terminal which can communicate with a database, said system comprising at least one terminal including means for receiving and identifying a card in its unissued state, computing means for originating an impersonal card-identifier and recording a registration code on the card, input means enabling a user to input to said computing means selected characters, said input means including a plurality of zones, which are operable by the user to cause input of the selected characters, said zones being arranged such that the character with which each zone is associated can change each time a card is received by the receiving and identifying means, said input characters being used for originating an impersonal user-identifier, and means for transmitting the impersonal identifiers to said database for recording an original set of identifiers for a card and user without reference to an individual person.
2. A card-based system according to claim 1, wherein the terminal includes means to encrypt the original card-identifier into a registration code for recording on or in the card.
3. A card-based system according to claims 1 and 2, wherein the said terminal includes means for printing the registration code on the card and means for scanning the registration code on the card.
4. A card-based system according to claim 3, wherein the registration code is an encoded image produced by thermal printing.
5. A card-based system according to claims 1 and 2, wherein the said terminal includes means for writing the registration code to the card and means for reading the registration code in the card.

6. A card-based system according to claim 5, wherein the registration code is stored in the memory of an integrated circuit enveloped by material layers.

7. A card-based system for generating impersonal identifiers for an issued  
5 card in a terminal which can communicate with a database, said system comprising at least one terminal including means for receiving and identifying a card in its issued state, computing means for decrypting the registration code recorded on the card to generate an impersonal card-identifier, input means enabling a user to input to said computing means selected characters, said input  
10 means including a plurality of zones, which are operable by the user to cause input of the selected characters, and said zones being arranged such that the character with which each zone is associate can change each time a card is received by the receiving and identifying means, said input characters being used for originating an impersonal user-identifier, and means for transmitting the  
15 impersonal identifiers to said database for matching a duplicate set of identifiers for a card and user without reference to an individual person.

8. A card-based system according to any preceding claim, wherein the database is at a server located remotely from the or each terminal.

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9. A card-based system according to any preceding claim, wherein the receiving and identifying means comprises a guide for guiding the card to selected positions for printing and scanning and to selected positions for writing and reading.

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10. A card-based system according to any preceding claim, wherein each card has recorded thereon data indicative of the card-type and the terminal includes means for identifying said data to enable the computing means to verify the card-type.

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11. A card-based system according to any preceding claim, wherein each card includes an integrated circuit for storing in memory discrete data, and said terminal includes means for writing and reading the discrete data to the integrated circuit.

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12. A card-based system according to claim 11, wherein the integrated circuit is concealed in the card.

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13. A card-based system according to claims 11 and 12, wherein the discrete data is a representation of a concealed facial image.

14. A card-based system according to any preceding claim, where each zone is arranged to display said characters.

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15. A card-based system according to claim 14, wherein the character displayed by each zone is visible only within a restricted viewing angle.

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16. A card-based system according to claim 14 or claim 15, wherein each zone is touch sensitive and is operable by a user placing a finger or object thereon.

17. A card-based system according to any preceding claim, wherein the zones are arranged in rows and columns.

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18. A card-based system according to any one of claims 14 to 17, wherein each zone is arranged to display a numeral.

19. A card-based system according to any one of claims 14 to 18, wherein each zone includes a filter.

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20. A card-based system according to any preceding claim, wherein the or each

terminal includes or has associated therewith display means for displaying messages and instructions and keyboard means for inputting data.

21. A card-based system for transmitting numeric data from any terminal  
5 location to any server location wherein, the terminal includes means to compile and transmit a constant set of numeric data for recording a set of impersonal identifiers in a database, and compile and transmit a constant set of numeric data for matching a set of impersonal identifiers in a database.

10 22. A card-based system according to claim 21, wherein the numeric data for a card-identifier has a constant order for recording or matching in a database at a server location.

23. A card-based system according to claim 21, wherein the numeric data for  
15 a user-identifier has a constant order for recording or matching in a database at a server location.

24. A card-based system according to claim 21, wherein the numeric data  
20 include a numeral to record the gender of the user-identifier in a database at a server location.

25. A card-based system according to claim 21, wherein the numeric data  
25 includes a site-identifier for a terminal location and a server location, for two-way communication.

26. A card-based system according to claim 21, wherein the numeric data  
includes a date-identifier to record the day and time at a server or terminal location.

30 27. A card-based system according to claim 21, wherein the numeric data

includes a data-identifier to record a transaction value at the server location.

28. A card-based system according to claim 21, wherein the numeric data includes a file-identifier to record an accept or reject condition at the server or  
5 terminal location.

29. A card-based system according to claim 21, wherein the numeric data is enciphered and deciphered by changing and reverting the order and value of a numeric combination at a terminal location and a server location.  
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30. A card-based system according to claim 7, wherein each terminal has associated therewith a host computer to which the terminal can transfer numeric data for transmission to the server database.

15 31. A card-based system according to any preceding claim including a plurality of terminals which can undergo two-way communication with a plurality of servers.

32. A card-based system which can generate a set of impersonal identifiers for an issued card in a computer terminal having an associated host computer for  
20 matching at a card-type server, wherein the system comprises

a) a terminal which incorporates means for receiving and identifying an impersonal card in an issued state, means for capturing a first image on the card for input to computing means which can decode and decrypt the image to generate  
25 an impersonal card-identifier in the terminal,

b) the terminal including sensor means with touch zones for illuminating an arrangement of segments in each touch zone to display within a restricted viewing angle, a random order of characters for a user to enter a concealed group of characters in a selected order for input to the computer to enable said computer  
30 to generate an impersonal user-identifier in the terminal,

c) the terminal being arranged to transfer the impersonal card-identifier and impersonal user-identifier to a host computer and

d) the host computer incorporates a modem to transmit a set of impersonal identifiers to locate a card-type record in the database of the card-type server for  
5 comparing the set of impersonal identifiers with data in the database, said modem being arranged to receive in response a set of instruction identifiers from the host computer indicative of the validity of the card and user.

33. A card-based system as claimed in claim 32, wherein all the data  
10 transmitted between the host computer and the server is in numeric form.

34. A card-based system comprising a network of computer terminals and a network of card-type servers which form separate communication networks for discrete card-types, and each network including integral means for originating  
15 impersonal identifiers at any computer terminal and for recording impersonal identifiers at the card-type server, said integral means for originating and recording the set of impersonal identifiers for an unissued card-type comprising:

a) means to receive and identify a card-type in the unissued state in a terminal,

20 b) means in the terminal to write discrete data to an integrated circuit incorporated in the card,

c) means in the terminal to originate an impersonal card-identifier for the card,

d) means in the terminal to originate an encrypted registration code for  
25 encoding and recording on the card,

e) means in the terminal to input a group of numerals and originate an impersonal user-identifier for the card,

f) means to transmit a set of impersonal identifiers for the card-type to a card-type server,

30 g) means to create a card-type record in the database of a card-type server

for recording the set of impersonal identifiers, and

h) means to transmit a set of instruction identifiers to the terminal to indicate the validity of the card and the user.

5 35. A card-based system comprising a network of computer terminals and a network of card-type servers which form separate communication networks for discrete card-types, and each network including integral means for generating impersonal card-identifiers at any computer terminal and matching impersonal identifiers at the card-type server, the integral means for generating and matching  
10 a set of impersonal identifiers for an issued card-type comprising:

a) means to receive and identify a card-type in the issued state in a terminal,

b) means in the terminal to read discrete data on an integrated circuit incorporated in the card,

15 c) means in the terminal to decode and decrypt a registration code on the card to generate an impersonal card-identifier,

d) means in the terminal to input a group of numerals and generate an impersonal user-identifier for the card,

e) means to transmit a set of impersonal identifiers for the card-type to a  
20 card-type server,

f) means to locate a card-type record in the database of the card-type server for matching the set of impersonal identifiers, and

g) means to transmit a set of instruction identifiers to the terminal to indicate the validity of the card and the user.

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36. A card-based system according to any preceding claim including a security centre which is arranged to transmit a two-way communication identifier for each terminal location and each server location to a router centre to provide network interconnection and to download the communication identifiers together with  
30 encryption codes to each computer terminal and each card-type server for routing

encrypted impersonal identifiers and instruction identifiers between the designated locations, and wherein security centre can communicate through the router centre for monitoring and upgrading each computer terminal at its designated location.

5 37. A card-based system according to any preceding claim, wherein each set of impersonal identifiers and each set of instructions identifiers for a discrete card-type includes a two-way communication identifier for identifying the terminal location and server location, and address each set of impersonal identifiers and instruction identifiers to create a card-type record in the database of a card-type  
10 server for anonymous registration at a data centre, or to locate a card-type record in the database of the same card-type for anonymous validation at the data centre.

38. A card-based system according to any preceding claim including separate data centres to provide demarcation and anonymity for the transfer of compiled  
15 data from a data centre with impersonal records to a data centre with personal records, wherein the data centre with impersonal records includes a card-type server for matching a set of impersonal identifiers in a card-type record to compile data to validate an identification or transaction at the data centre, and transfer the compiled data to the data centre of a discrete card-issuer with personal records,  
20 the compiled data is impersonal and includes a reference number and activity record for the card-issuer to enter the compiled data in a personal record with the same reference number.

39. A card-based system according to claim 1, wherein an attendant inserts an  
25 unissued card in the receiving and identifying means, said computing means originates an impersonal card-identifier, the user operates said input means to input selected characters known only to the user. said computing means processes the input characters to originate an impersonal user-identifier and said terminal transmits said impersonal identifiers to said database for recording an original set  
30 of impersonal identifiers therein.



40. A card-based system according to claim 39 wherein said terminal receives instruction identifiers from the database to accept or reject the impersonal identifiers and instruct the attendant to remove the card from said terminal to keep an invalid card or hand a valid card to the user.

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41. A card-based system according to claim 7, wherein an attendant inserts an issued card in the receiving means, and identifying said computer means generates the impersonal card-identifier, the user operates said input means to input selected characters known only to the user, said computing means processes the input  
10 characters to originate an impersonal user-identifier, and said terminal transmits said impersonal identifiers to said database for matching a duplicate set of impersonal identifiers therein.

42. A card-based system according to claim 39 and 41, wherein a duplicate set  
15 of impersonal identifiers are compared with an original set of impersonal identifiers in the same database of a card-type server.

43. A card-based system according to claim 39 or 41, wherein the impersonal identifiers and instruction identifier are solely in numeric form.

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44. A card-based system for impersonal cards, wherein the card is constructed of laminate material comprising two outer layers bonded to a middle layer for concealing an integrated circuit and aerial within the middle layer for writing and reading data in the receiving and identifying means.

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45. A card-based system according to claim 44 wherein the middle layer comprises a material with inductance and or capacitance properties to supply an electric charge to power the integrated circuit when the card is inserted in the receiving and identifying means.

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46. A card-based system according to claim 44 wherein the laminate material includes a printed overlay film on the outer surface of each outer layer to display machine printed information for different card-types.

5 47. A card-based system according to claims 44 and 46, wherein the laminate material includes a thermal layer affixed thereto for terminal printing thermal images and characters in defined areas for different card-types.

10 49. A card-based system according to claim 47 wherein the thermal layer includes a passive circuit on the underside to detect the said circuit when a card-type is inserted in the receiving and identifying means.